

## ECO507A: Topics in Managerial Economics / Instructor: Dr. Deep Mukherjee

**Objective of the Course:** Managerial Economics helps managers to arrive at a set of operating rules that aid in the efficient use of scarce human and capital resources. This course is a compilation of selected topics from the fields Microeconomics, Finance, and Operations Research. This course is designed to talk about the major concepts and analytical techniques that are needed in the decision-making process while managing a firm or an engineering/investment project. This course also provides the foundations for undertaking applied quantitative research in business environment. However, the use of Managerial Economics is not limited to profit-making firms and organizations. But it can also be used to help in decision-making process of non-profit organizations.

### Course outline (Tentative):

| Topic  | Number of lectures |
|--|--------------------|
| <b>Concepts from Microeconomics:</b> Demand function and its properties, Elasticities, Cost function and its properties, Derivation of supply function, Short run and long run equilibrium of a competitive firm                       | 10                 |
| <b>Financial Analysis for Decision-making by Firm:</b> Rate of return, Present-worth analysis, Cost of capital, Economic life, Replacement economy, Minimum cost points  | 10                 |
| <b>Cost Benefit Analysis:</b> Microeconomic foundation; Valuing outcomes (Willingness to pay); Valuing inputs (Opportunity cost); Social discount rate; Net present value; Incorporating risk and uncertainty in Cost Benefit Analysis | 10                 |
| <b>Linear Programming &amp; Applications:</b> Graphical solution; Simplex method; Transportation problem; Location models; Capital budgeting   | 10                 |
| <b>Total number of lectures (Class time: 50 minutes)</b>   | <b>40</b>          |

### Suggested Textbooks:

1. Boardman, A. E., Greenberg, D. H., Vining, A. R., & Weimer, D. L. (2017). *Cost-Benefit Analysis: concepts and practice*. Cambridge University Press.
2. Mansfield, E., Allen, W. B., Doherty, N. A., & Weigelt, K. (1999). *Managerial Economics: Theory, applications, and cases*. New York: WW Norton.
3. Ragsdale, C. T. (1997). *Spreadsheet Modeling and Decision Analysis*. South-Western Thomson Learning.
4. Riggs, J. L., Bedworth, J. R. D., & Randhawa, S. U. (1996). *Engineering Economics*. New York: McGraw-Hill